Satyrn Access Point A021-EA/PA

SATYRN A021-EA/PA

USER MANUAL

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1 Introduction

1.1 About the Satyrn A021-EA/PA Access Point

The Satyrn A021-EA/PA is an innovative and reliable IEEE802 11b/g WLAN access point with 2 LAN ports. You can configure the A021-EA/PA to operate in AP/Bridge/Repeater/AP-Client/Client mode using Satyrn View or a Web interface via the LAN port or the WLAN interface. A021-EA/PA offers many powerful hardware and software redundancy features. With its dual Ethernet ports you can daisy chain a number of Access Points together.

The A021-PA can be powered via PoE.

The A021-EA/PA provides dual redundant power inputs on a terminal block on the base of the Access Point.

1.2 Key features

- WLAN interface supports up to 54MBps link speed
- WEP/WPA/WPA2/Radius/TKIP
- SAP/Bridge/Repeater/AP-Client/Client Mode supported
- Daisy Chain LAN switch
- Secured Management by HTTPS
- Event Warning by Syslog, Email, SNMP Trap, Relay and Beeper
- Various Windows O.S. supported:
    - Windows NT/2000/ XP/ 2003/VISTA/Windows7/Windows8
- Dual redundant Power Inputs: 12~48VDC on a terminal block
- PoE powered device (IEEE802.3af)
- Operating temperature -10 to +70°C
- Storage temperature -40 to +85°C
- Operating humidity 5-95% non-condensing
- Casing IP-30
- Dimensions 54 x 105 x 145mm (W x D x H)

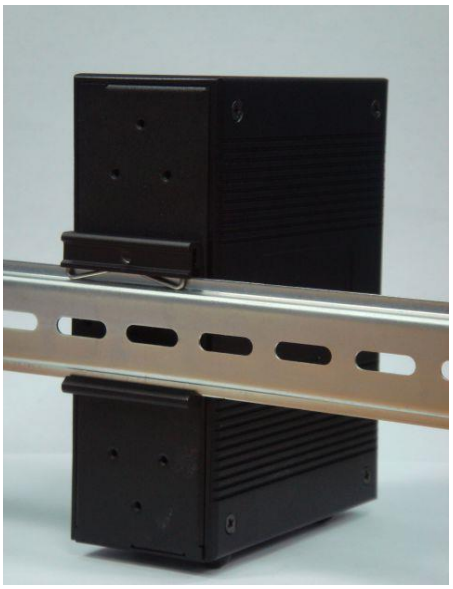
2 Hardware Installation

2.1 DIN Rail mounting

Each A021-EA/PA has a DIN Rail fitting on the rear panel.

Step 1: Slant the A021-EA/PA and mount the metal spring to DIN-Rail.

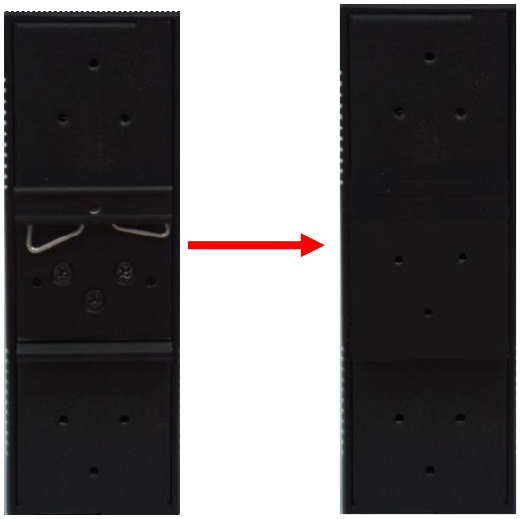
Step 2: Push the A021-EA/PA toward the DIN-Rail until you hear a click.



2.2 Wall Mounting Installation

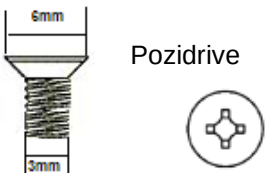
A wall mount panel can be found in the package.

Step 1: Remove the DIN-Rail kit.



Step 2: Use the 6 screws included to fix the wall mount bracket the back panel.

To prevent any damage to the A021-EA/PA only use the screws provided.



3 Hardware overview

3.1 Front Panel

1. 2.4GHz antenna with typical 3.0 dbi antenna.
2. LED for PoE power and system status.
3. LED for PWR1 and system status.
4. LED for PWR2 and system status.
5. LED for Fault Relay.
6. 10/100Base-T(X) Ethernet ports. (Port 2 on A021-PA is PoE powered)
7. LED for Ethernet ports status.
8. LED for WLAN link status.
9. LED for WLAN signal strength.

3.2 Front Panel LEDS

The following table describes the LED functions on the A021-EA/PA.

LED	Colour	Status	Description
PoE A021-PA	Green/Red	Green On	PoE power connected
		Red blinking	Indicates an IP conflict, or DHCP or BOOTP server not responding properly
PWR1	Green/Red	Green On	DC power 1 activated.
		Red blinking	Indicates an IP conflict, or DHCP or BOOTP server not responding properly
PWR2	Green/Red	Green On	DC power 2 activated.
		Red blinking	Indicates an IP conflict, or DHCP or BOOTP server not responding properly
Fault	Amber	Amber on	Fault relay. Power failure or port down/fail
WLAN	Green	On	WLAN activated
		Blinking	WLAN data transmitted
WLAN Strength	Green	Green on	WLAN signal strength 1 up to 25%, 2 up to 50%, 3 up to 75%, 4 up to 100%
ETH1	Green/Amber	Green On/Blinking	100Mbps LNK/ACT
		Amber On/Blinking	10Mbps LNK/ACT
ETH2	Green/Amber	Green On/Blinking	100Mbps LNK/ACT
		Amber On/Blinking	10Mbps LNK/ACT

3.3 Power connector

The power connector provides connection for PWR1, PWR2 (12 ~ 48V DC) and a relay output (1A at 24VDC).

3.4 Reset to Factory Default

Press and hold the reset button for 5 seconds to set the unit to its factory defaults.

3.5 Ethernet Cables

The A021-EA/PA has standard Ethernet ports and according to the link type you can use CAT 3, 4, 5,5e UTP cables to connect to any other network device (PCs, servers, switches, routers, hubs ,etc.). Please refer to the following table for cable specifications.

Cable	Type	Max. Length	Connector
10BASE-T	Cat. 3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-TX	Cat. 5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45

The pin assignments are as follows

Pin Number	Assignment
1	TD+
2	TD-
3	RD+
4	P.O.E. power input +
5	P.O.E. power input +
6	RD-
7	P.O.E. power input -
8	P.O.E. power input -

The A021-EA/PA supports auto MDI/MDI-X operation.

3.6 Wireless Antenna

The A021-EA/PA uses a 2.4GHz antenna with a reversed SMA connector. An external antenna can also be used

4 Configuring using the Web Browser

An embedded HTML web site resides in flash memory. It contains advanced management features and allows you to manage the switch from anywhere on the network through a standard web browser such as Microsoft Internet Explorer. The browser-based management function supports Internet Explorer 5.0 or higher. It is based on Java applets with an aim to reduce network bandwidth consumption, enhance access speed and provide an easy, useful interface.

Note: By default, version IE5.0 or later does not allow Java Applets to open sockets. You will need to explicitly modify the browser settings in order to enable Java applets to use the network port.

Preparing for Browser-based Management

The default settings are as follows:

IP Address	192.168.250.250
Subnet Mask	255.255.255.0
Default Gateway	192.168.250.1
User Name	comtrol
Password	satyrn

System Login

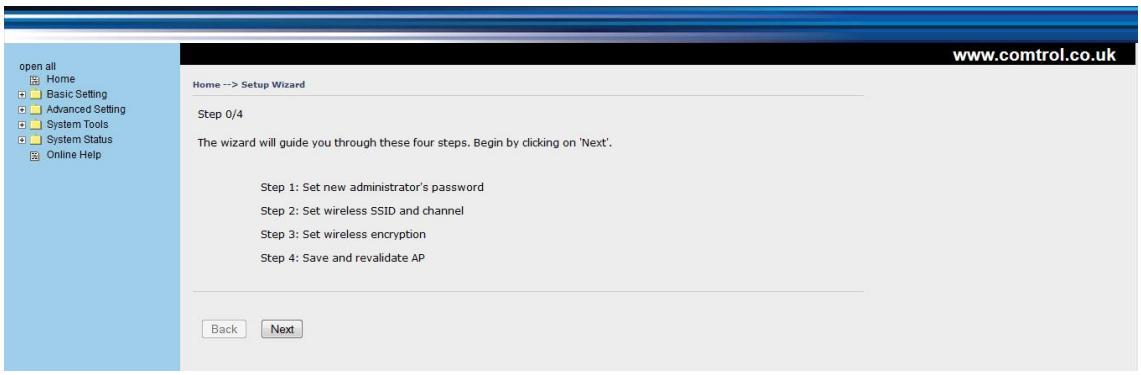
Launch Internet Explorer or another Internet browser.

Type https:// followed by the IP address of the switch (the default IP address is 192.168.250.250) into the address field and then press "Enter".

NB. In some circumstances the connection appears untrusted as it is a self-signed certificate; there is not a problem and accept the connection.

When the login screen appears, enter the User name and Password (the default User name is 'comtrol' and the default Password is 'satyrn') into the fields and then press 'Enter' or click the OK button.

The main interface of the Browser-based management will appear and you will be given the option to run the set up Wizard.



4.1 Set up Wizard

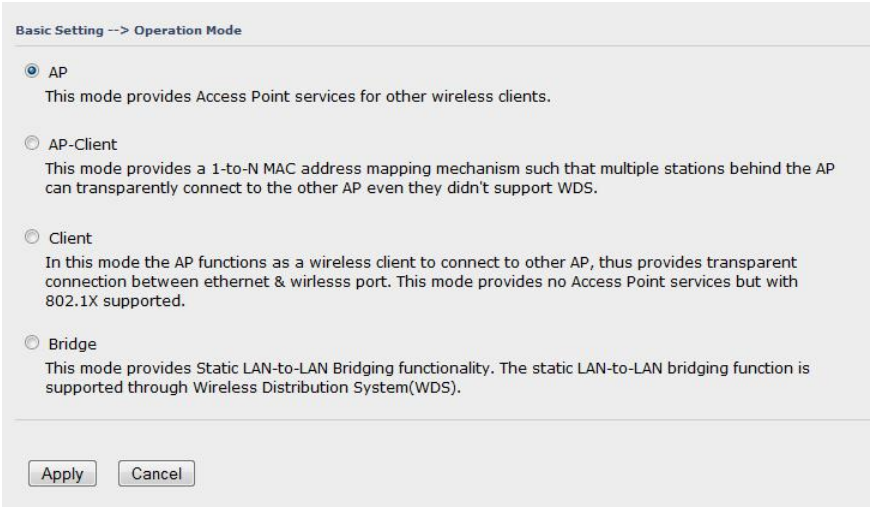
There are basic setting options here for

- Web Admin password
- SSID Channel and number for the A021-EA/PA
- Wireless encryption
- Saving the setting you have just changed.

If you decide not to run the Wizard you can access the various settings by clicking on the appropriate option in the left hand panel.

4.2 Basic Settings

4.2.1 Operation Mode


Basic Setting --> Operation Mode
AP
This mode provides Access Point services for other wireless clients.
AP-Client
This mode provides a 1-to-N MAC address mapping mechanism such that multiple stations behind the AP can transparently connect to the other AP even they didn't support WDS.
Client
In this mode the AP functions as a wireless client to connect to other AP, thus provides transparent connection between ethernet & wirlesss port. This mode provides no Access Point services but with 802.1X supported.
Bridge
This mode provides Static LAN-to-LAN Bridging functionality. The static LAN-to-LAN bridging function is supported through Wireless Distribution System(WDS).
Apply
Cancel

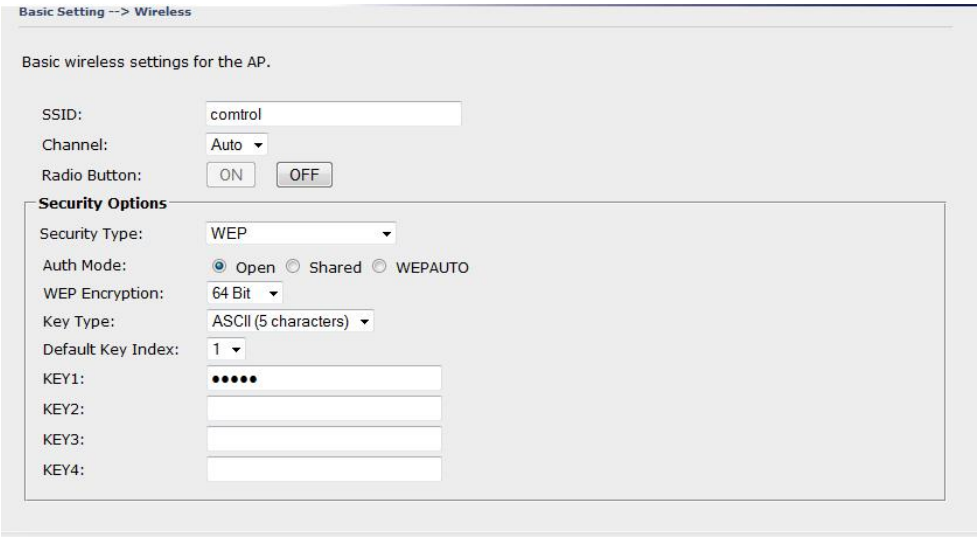
The following table describes the options available.

Options	Description
AP	This mode provides Access Point services for other wireless clients
AP-Client	The AP-Client function provides a 1-to-N MAC address mapping mechanism such that multiple stations behind the AP can transparently connect to the other AP even if they don't support WDS.
Client	In this mode the AP functions as a wireless client to connect to other AP, thus provides transparent connection between Ethernet & the wireless port. This mode provides no Access Point services but has 802.1X supported
Bridge	This mode provides Static LAN-to-LAN Bridging functionality. The static LAN-to-LAN bridging function is supported through Wireless Distribution System (WDS).

In each mode, the A021-EA/PA forwards packets between its Ethernet interface and wireless interface for wired hosts on the Ethernet side, and wireless hosts on the wireless side.

4.2.2 Wireless Mode

You can set the various wireless settings for the Access Point here.



The following table describes the options available.

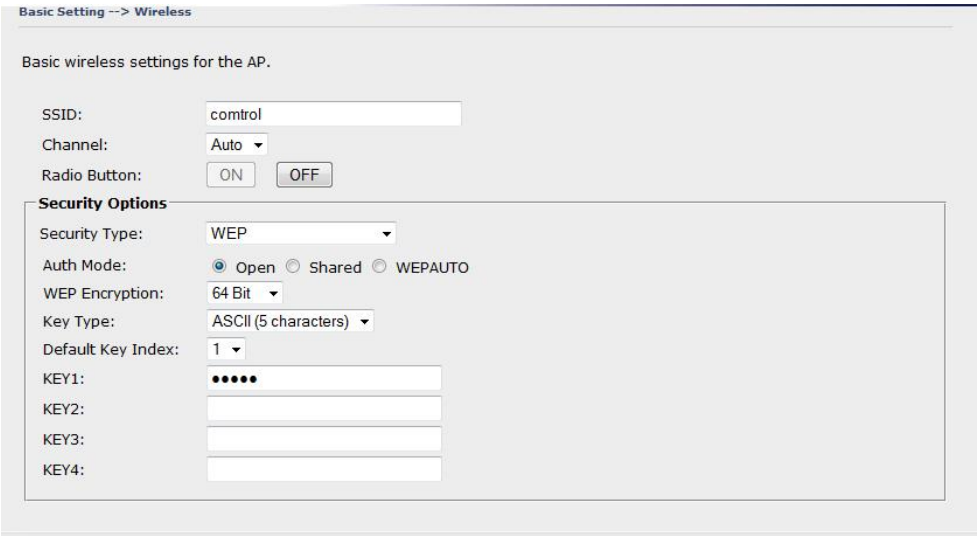
Option	Description
SSID	The SSID is a unique name that identifies a network. All devices on the network must share the same SSID name in order to communicate on the network. If you change the SSID from the default setting, input your new SSID name in this field
Channel	All devices on the network must be set to the same channel to communicate on the network.
Peer AP SSID	When the AP is working in AP-Client mode you should enter the SSID for the network the AP client wants to join.
Security type	**None:** No security. **WEP:** WEP security. **WPA-PSK/WPA2-PSK:** WPA-PSK or WPA2-PSK security without a RADIUS server. **WPA/WPA2:** WPA or WPA2 authentication in conjunction with a RADIUS server. **802.1x:** Authentication through RADIUS server
DNS Server	Enter the IP address of the DNS server, The DNS server translates domain names into IP addresses.
Switch Mode	**Redundant:** When the connection between master-link and LAN fails, the DS can automatically switch to another LAN port within10mS, and still guarantees a non-stop connection **Switch:** Daisy Chain support to reduce usage of switch ports.

4.2.3 Security options

4.2.3.1 None

With this selected there is no security protection on your Wireless LAN access.

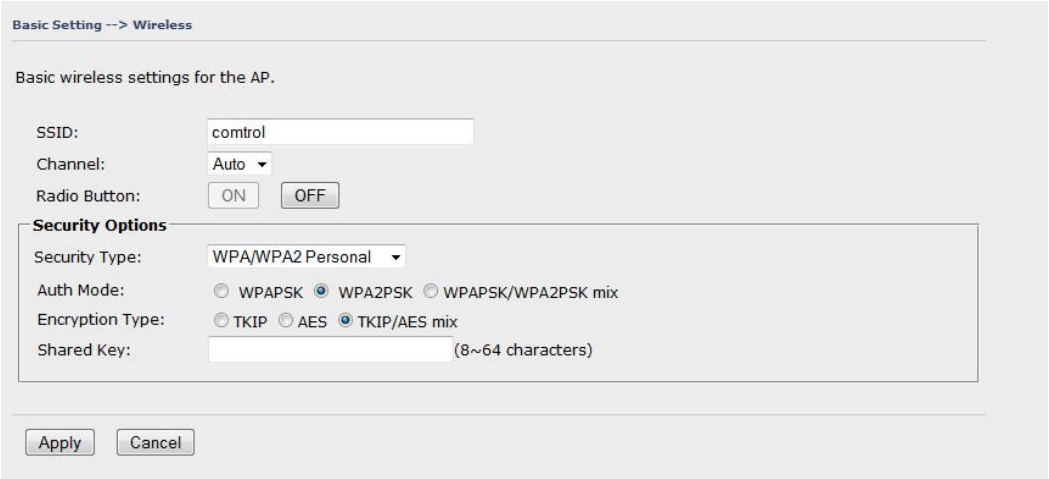
4.2.3.2 WEP



The following table describes the options available.

Option	Description
WEP Encryption	Select 64 or 128 Bit WEP encryption
Key Type	Select ASCII or Hex key type
Default Key Index	Select one of the keys to be the active key.
Key 1-4	Input up to four encryption keys

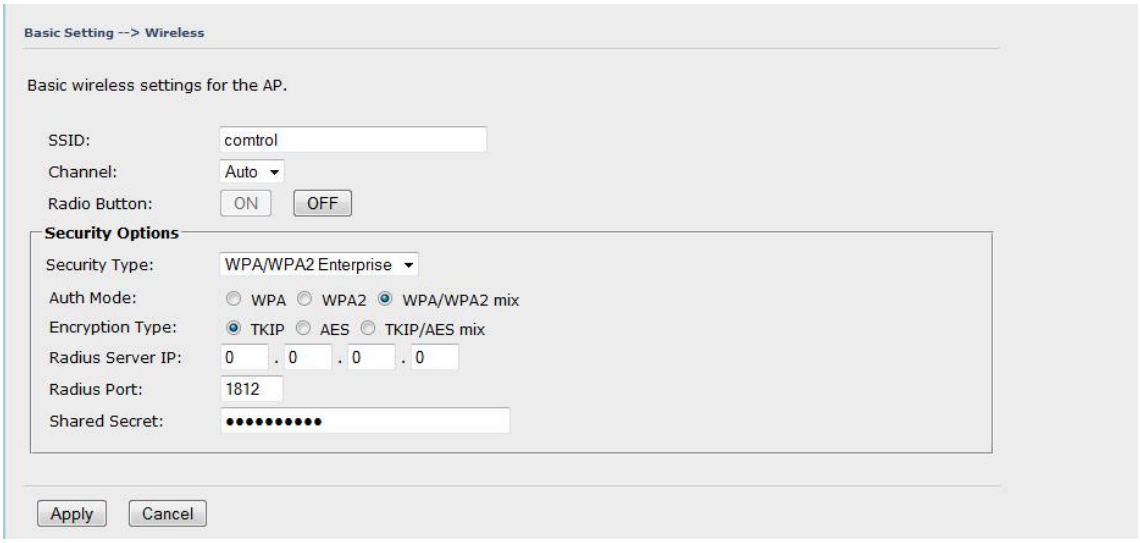
4.2.3.3 WPA/WPA Personal



This uses a pre-shared key and TKIP or AES encryption options. Enter the Pre-Shared Key between 8 and 64 characters long or 64 hexadecimal characters in length.

4.2.3.4 WPA/WPA Enterprise

WPA/WPA2 uses an external RADIUS server to perform user authentication.

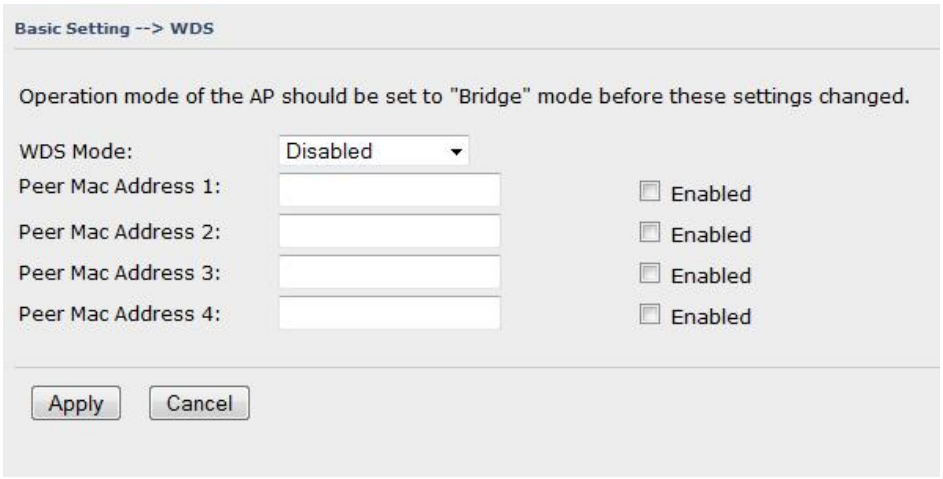


The following table describes the options available.

Option	Description
Radius Server IP	Enter the IP address of the RADIUS Server
Port	Enter the RADIUS Port number (1812 is default)
Shared key	Enter the RADIUS pass word or key

4.2.4 WDS

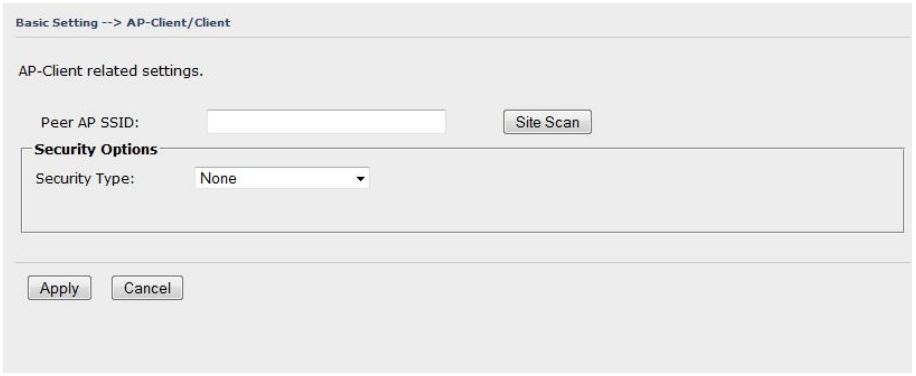
WDS (Wireless Distribution System) is a Wireless Access Point mode that enables wireless bridging in which WDS APs communicate only with each (without allowing wireless clients or stations to access them), and/or wireless repeating in which APs communicate both with each other and with wireless stations at the expense of half the throughput. The operation mode of the AP should have been set to "Bridge" mode before altering these settings.



The following table describes the options available.

Option	Description
WDS mode	Enable or disable WDS mode
Peer MAC address	Enter the Mac address of peer Aps in the format "aa:bb:cc:dd:ee:ff",

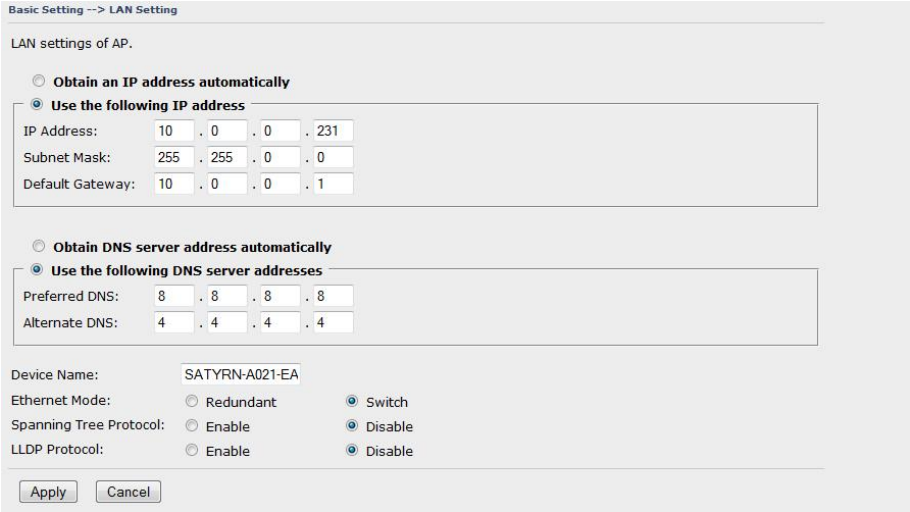
4.2.5 AP Client/Client



This page sets the SSID & security to connect to another AP. You should ensure that the Security type matches that of the AP server.

4.2.6 LAN Settings

This section sets the LAN settings for the AP.

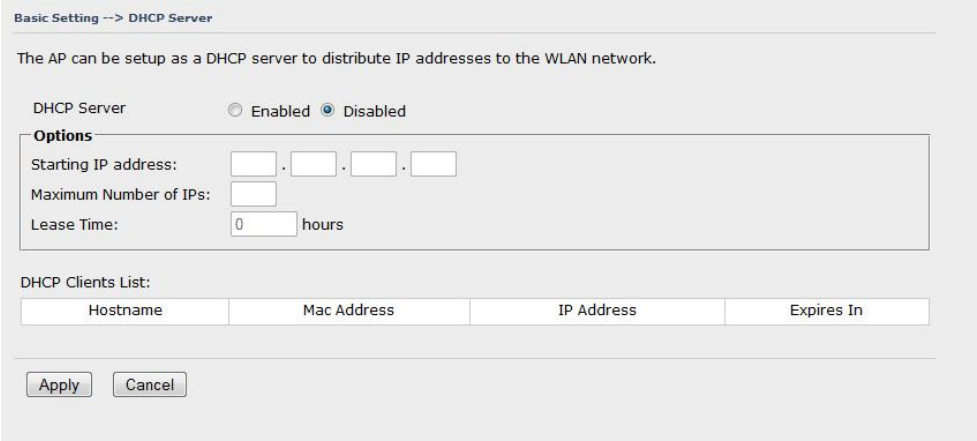

Basic Setting --> LAN Setting
LAN settings of AP.
Obtain an IP address automatically
Use the following IP address
IP Address: 10 . 0 . 0 . 231
Subnet Mask: 255 . 255 . 0 . 0
Default Gateway: 10 . 0 . 0 . 1
Obtain DNS server address automatically
Use the following DNS server addresses
Preferred DNS: 8 . 8 . 8 . 8
Alternate DNS: 4 . 4 . 4 . 4
Device Name: SATYRN-A021-EA
Ethernet Mode: Redundant Switch
Spanning Tree Protocol: Enable Disable
LLDP Protocol: Enable Disable
Apply
Cancel

The following table describes the options available.

Option	Description
Obtain an IP address automatically	The IP address is obtained from the DHCP server
Use the following IP address	Manually assigning an IP address. **IP Address:** There is a default IP address in the AP, and you can input a new IP address. **Subnet Mask:**. All devices on the network must have the same subnet mask to communicate on the network. **Default Gateway:** Enter the IP address of the router in your network.
Obtain DNS server address automatically	This option is selected by the DHCP server.
Use the following DNS server addresses	This option is selected by manually set **Preferred DNS:** Enter the default DNS server IP address. **Alternate DNS:** Enter the alternative DNS server address.

4.2.7 DHCP Server

The AP can be set up as a DHCP server to provide IP addresses for the rest of the LAN.

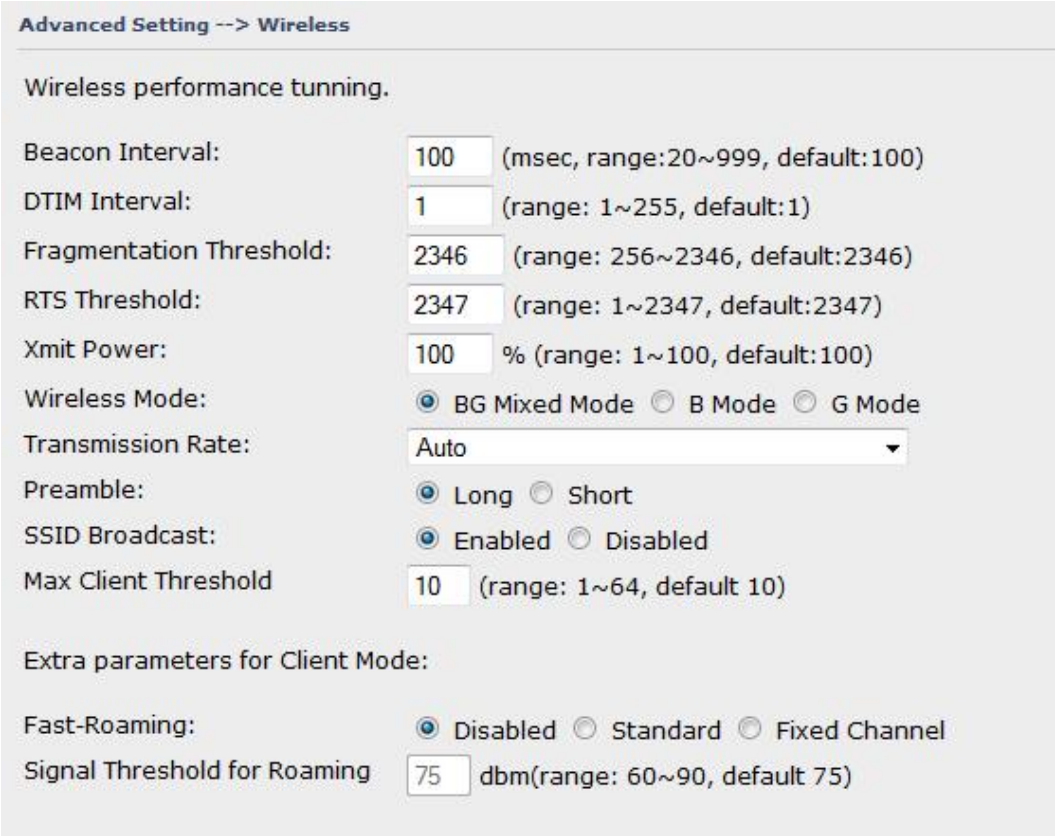


The following table describes the options available.

Option	Description
DHCP Server	Enable or Disable the DHCP Server function. Enable – the AP will be the DHCP server on your local network
Starting IP Address	This is the first IP address available
Maximum Number of IPs	This is the total number of IP addresses available
Lease Time (Hour)	This is the length of time before the system will reset the dynamic IP assignment.
DHCP Clients List	This is the list of devices on your network that are receiving dynamic IP addresses from the A021-EA/PA

4.3 Advanced Settings

4.3.1 Wireless Settings


Advanced Setting --> Wireless
Wireless performance tunning.
Beacon Interval: 100 (msec, range:20~999, default:100)
DTIM Interval: 1 (range: 1~255, default:1)
Fragmentation Threshold: 2346 (range: 256~2346, default:2346)
RTS Threshold: 2347 (range: 1~2347, default:2347)
Xmit Power: 100 % (range: 1~100, default:100)
Wireless Mode: BG Mixed Mode B Mode G Mode
Transmission Rate: Auto
Preamble: Long Short
SSID Broadcast: Enabled Disabled
Max Client Threshold 10 (range: 1~64, default 10)
Extra parameters for Client Mode:
Fast-Roaming: Disabled Standard Fixed Channel
Signal Threshold for Roaming 75 dbm(range: 60~90, default 75)

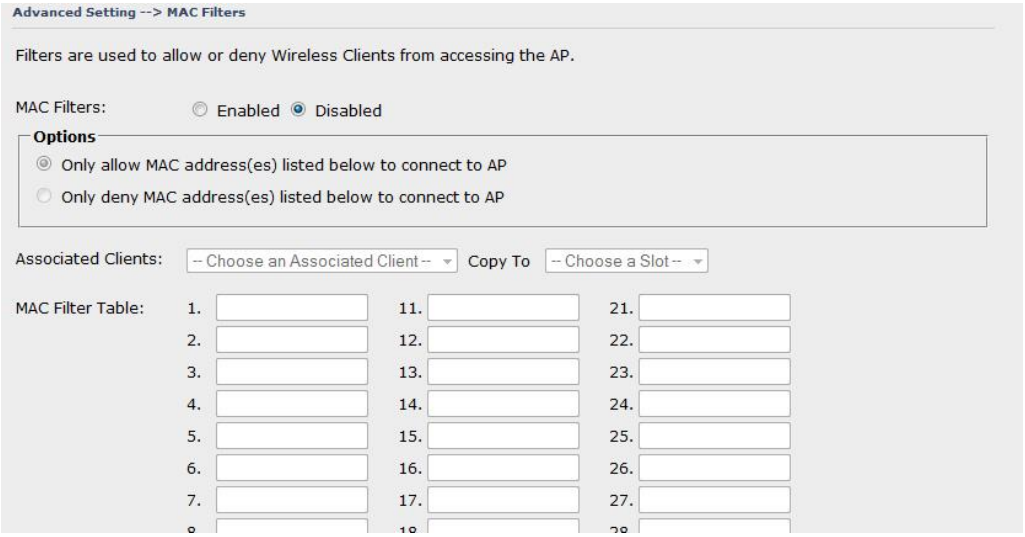
The following table describes the options available.

Label	Description
Beacon Interval	The default value is 100. The Beacon Interval value indicates the frequency interval of the beacon. A beacon is a packet broadcast by the AP to synchronize the wireless network. 50 is recommended in poor reception.
DTIM Interval	The default value is 1. This value, between 1 and 255 milliseconds, indicates the interval of the Delivery Traffic Indication Message (DTIM). A DTIM field is a countdown field informing clients of the next window for listening to broadcast and multicast messages. When the AP has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and prepares to receive the broadcast and multicast messages.
Fragmentation Threshold	This value should remain at its default setting of 2346. The range is 256-2346 bytes. It specifies the maximum size for a packet before data is fragmented into multiple packets. If you experience a high packet error rate, you may slightly increase the Fragmentation Threshold. Setting the Fragmentation Threshold too low may result in poor network performance. Only minor

	modifications of this value are recommended.
RTS Threshold	This value should remain at its default setting of 2347. The range is 0-2347 bytes. Should you encounter inconsistent data flow, only minor modifications are recommended. If a network packet is smaller than the preset RTS threshold size, the RTS/CTS mechanism will not be enabled. The AP sends Request to Send (RTS) frames to a particular receiving station and negotiates the sending of a data frame. After receiving an RTS, the wireless station responds with a Clear to Send (CTS) frame to acknowledge the right to begin transmission.
Xmit Power	Control RF transmission power, this value ranges from 1 - 100 percent, default value is 100 percent.
Wireless Network Mode	If you have 802.11g and 802.11b devices in your network, then keep the default setting, BG Mixed mode. If you have only 802.11g devices select G Mode. If you would like to limit your network to only 802.11b devices, then select B Mode.
Transmission Rate	The default setting is **Auto**. The range is from 1 to 54Mbps. The rate of data transmission should be set depending on the speed of your wireless network. You can select from a range of transmission speeds, or keep the default setting, Auto, to have the AP automatically use the fastest possible data rate and enable the Auto-Fallback feature. Auto-Fallback will negotiate the best possible connection speed between the AP and a wireless client.
Preamble	Values are Long and Short, default value is Long. If your wireless device supports the short preamble and you are having trouble getting it to communicate with other 802.11b devices, make sure that it is set to use the long preamble
SSID Broadcast	When wireless clients survey the local area for wireless networks to associate with, they will detect the SSID broadcast by the AP. To broadcast the AP SSID, keep the default setting, Enable. If you do not want to broadcast the AP SSID, then select Disable.
X-Roaming	**Disable:** Disable X-Roaming protocol. **Standard:** Roaming group does not require the same wireless channel, but is slower to switch than the “fixed channel” mode **Fixed channel:** Roaming group must be required the same wireless channel, but is faster to switch than the “Standard” mode
Signal Threshold for Roaming	Roaming signal threshold setting. When the signal is below this value the AP will roam to another client target which the same SSID, security option and the strongest signal. This value is only used on client-mode equipment.
Max Client Threshold	This is the maximum number of client for an AP. When this number is exceeded the AP will reject the roaming connection. This value is only used on AP-mode equipment.

4.3.2 MAC Filter

This controls the wireless clients that can access the A021-EA/AP using the clients MAC addresses.

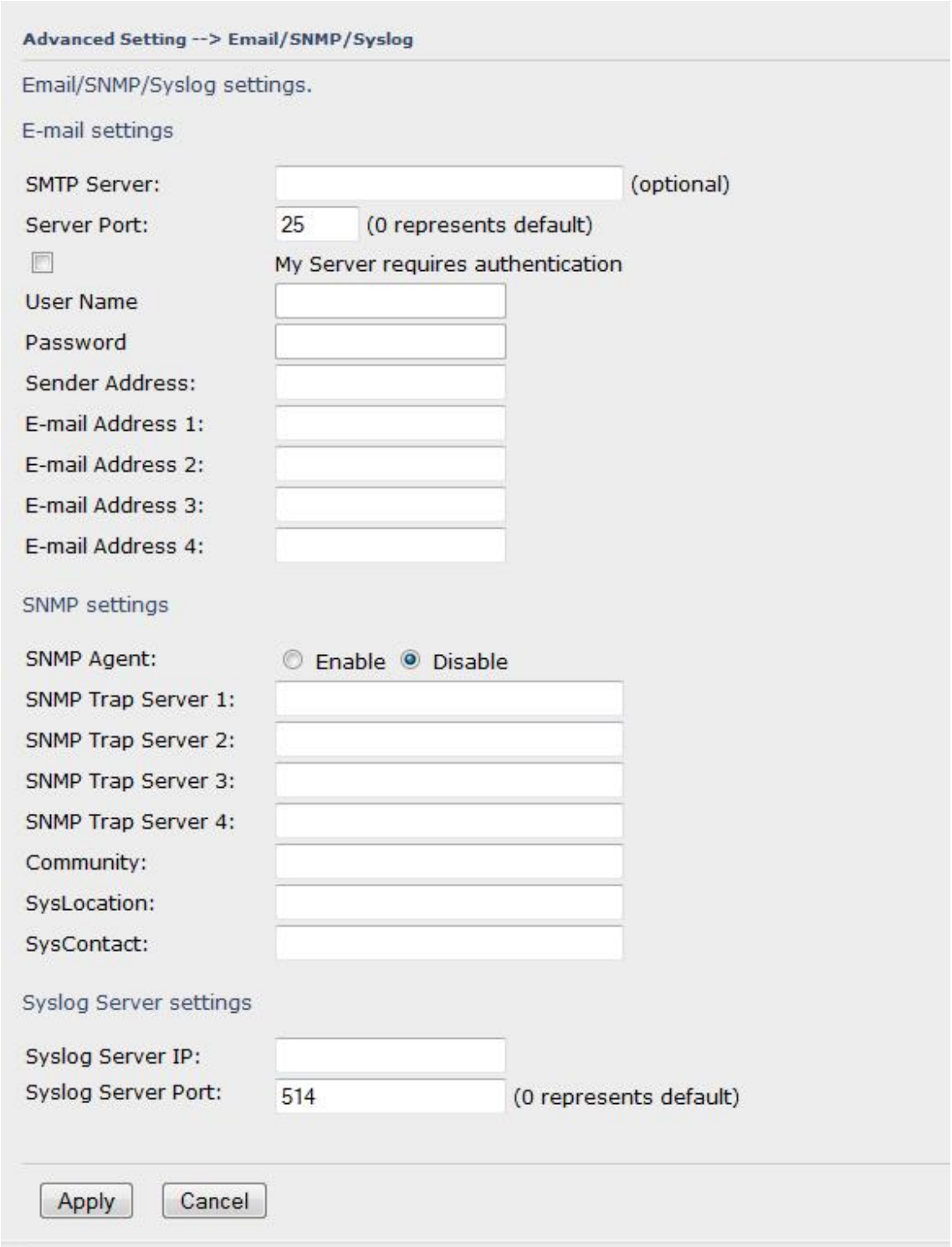

Advanced Setting --> MAC Filters
Filters are used to allow or deny Wireless Clients from accessing the AP.
MAC Filters: Enabled Disabled
Options
Only allow MAC address(es) listed below to connect to AP
Only deny MAC address(es) listed below to connect to AP
Associated Clients: -- Choose an Associated Client -- Copy To -- Choose a Slot --
MAC Filter Table:
1. 2. 3. 4. 5. 6. 7.
11. 12. 13. 14. 15. 16. 17.
21. 22. 23. 24. 25. 26. 27.

The following table describes the options available.

Option	Description
MAC Filter	Enable or disable the MAC filter.
Options	The list will contain those allowed or those disallowed to connect to the AP
Associated Client	When the MAC filter is enabled, the clients associated with the AP are shown here and they can be copied to the MAC Filter Table
MAC Filter Table	This list will display the MAC addresses that are in the selected filter.
Apply	Click Apply to set the configurations.

4.3.3 E-Mail/SNMP/Syslog

When a system event occurs (see next section) such as a setting change or a power fault, the event can be sent to an administrator via e-mail, as a trap to an SNMP server and as a Syslog locally or remotely to a Sys log server. If there is a serious event such as a power fault or link down, a local LED will light.



The following tables describe the options.

SMTP Server

Label	Description
SMTP Server	Simple Message Transfer Protocol, enter the backup host to use if primary host is unavailable while sending mail by SMTP server.
Server Port	Specify the port where MTA can be contacted via SMTP server.
E-mail Address 1-4	Input specific the destination mail address.

SNMP Settings

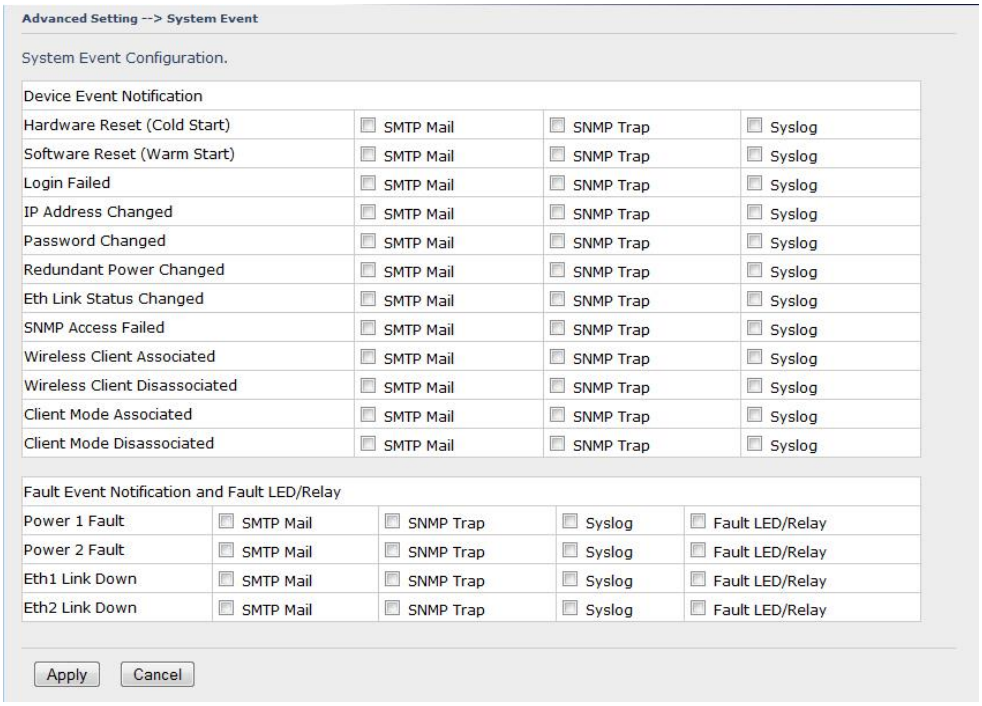
Options	Description
SNMP Agent	SNMP (Simple Network Management Protocol) Agent is a service program that runs on the access point. The agent provides management information to the NMS by keeping track of various operational aspects of the AP system.
SNMP Trap Server 1-4	Specify the IP of the trap server. This is the address the AP sends the traps it generates.
Community	Community is essentially password to establish trust between managers and agents. Normally "public" is used for read-write community.
SysLocation	Specify sysLocation string.
SysContact	Specify sysContact string.

Syslog Server Settings

Options	Description
Syslog Server IP	Syslog will keep logs locally. The logs can also be sent to a remote server. Specify the IP of remote server. Leave it blank to disable logging remotely.
Syslog Server Port	Specify the port of remote logging. Default port is 514.

4.3.4 System Event

The System Events that is triggered and recorded via <<>>

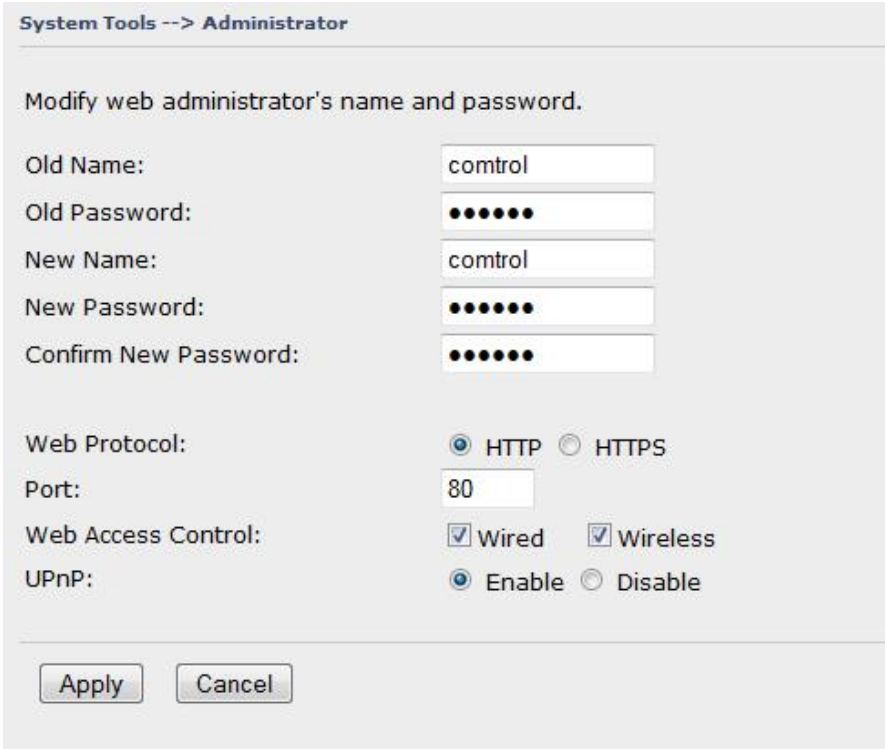

Advanced Setting --> System Event
System Event Configuration.
Device Event Notification
Hardware Reset (Cold Start) SMTP Mail SNMP Trap Syslog
Software Reset (Warm Start) SMTP Mail SNMP Trap Syslog
Login Failed SMTP Mail SNMP Trap Syslog
IP Address Changed SMTP Mail SNMP Trap Syslog
Password Changed SMTP Mail SNMP Trap Syslog
Redundant Power Changed SMTP Mail SNMP Trap Syslog
Eth Link Status Changed SMTP Mail SNMP Trap Syslog
SNMP Access Failed SMTP Mail SNMP Trap Syslog
Wireless Client Associated SMTP Mail SNMP Trap Syslog
Wireless Client Disassociated SMTP Mail SNMP Trap Syslog
Client Mode Associated SMTP Mail SNMP Trap Syslog
Client Mode Disassociated SMTP Mail SNMP Trap Syslog
Fault Event Notification and Fault LED/Relay
Power 1 Fault SMTP Mail SNMP Trap Syslog Fault LED/Relay
Power 2 Fault SMTP Mail SNMP Trap Syslog Fault LED/Relay
Eth1 Link Down SMTP Mail SNMP Trap Syslog Fault LED/Relay
Eth2 Link Down SMTP Mail SNMP Trap Syslog Fault LED/Relay
Apply
Cancel

Click on an appropriate box to notify a particular event.

4.4 System Tools

4.4.1 Administrator

This section is used to set the password.

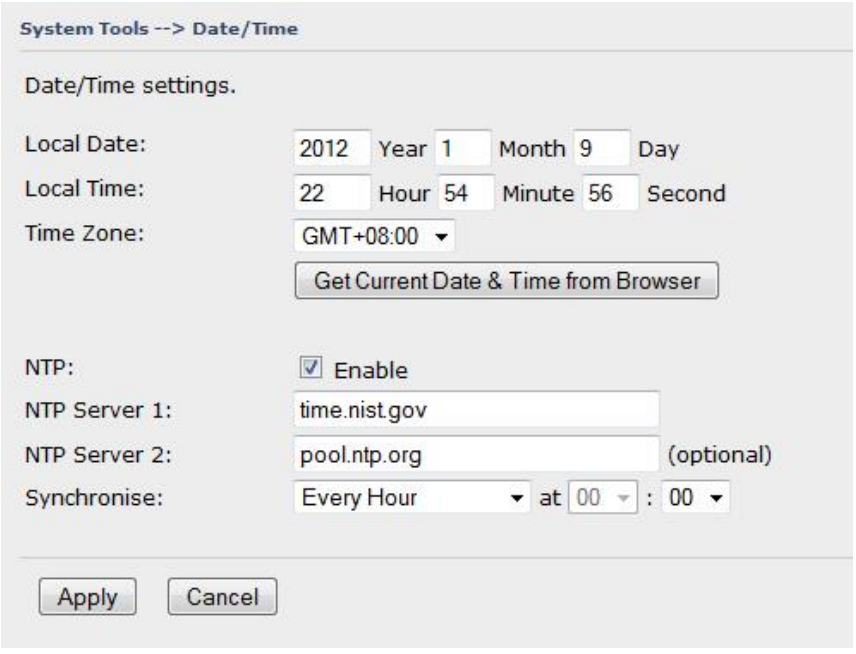


The following table describes the options.

Options	Description
Old Name	The default is comtrol
Old Password	The default is satyrn.
New Name	Enter a new login name. Acceptable inputs of this field contains '0-9', 'a-z', 'A-Z' and must be between 1 to 15 characters in length. This field cannot accept null input.
New Password	Enter a new login password. Acceptable inputs of this field contains '0-9', 'a-z', 'A-Z' and must be between 0 to 15 characters in length.
Confirm New Password	Retype the password to confirm it. Acceptable inputs of this field contains '0-9', 'a-z', 'A-Z' and must be between 0 to 15 characters in length.
Web Protocol	The default value is **HTTP. HTTPS** provides higher security.
Port	The default port is (HTTP: 80, HTTPS: 443).
Web Access Control	You can access the AP web page via Wired and Wireless.
UPnP	Enable/Disable

4.4.2 Date & Time

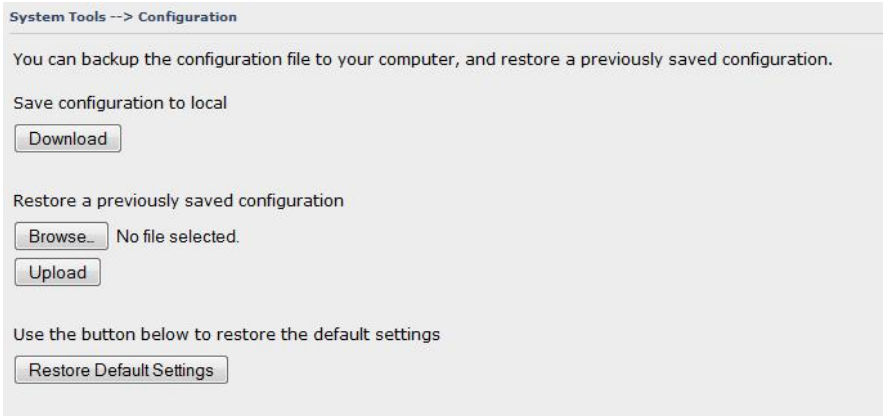
Set the time of the AP using this page. An NTP server can be used to synchronise date & time.



The following table describes the options.

Option	Description
Local Date	Set the local date
Local Time	Set the local time
Time Zone	Select the time zone
Get Current Date & Time from Browser	Use the browser to set the time & date
NTP	Enable or disable NTP function to obtain the time from the NTP server.
NTP Server 1	The default NTP Server.
NTP Server 2	The secondary NTP Server.
Synchronise	Set the time for AP synchronising with the NTP Server

4.4.3 Configuration


System Tools --> Configuration
You can backup the configuration file to your computer, and restore a previously saved configuration.
Save configuration to local
Download
Restore a previously saved configuration
Browse...
No file selected.
Upload
Use the button below to restore the default settings
Restore Default Settings

The following table describes the options.

Option	Description
Download	The current system settings can be saved as a file onto the local hard drive.
Upload configuration	The saved file or any other saved setting file can be uploaded to the AP. To reload a system settings file, click on **Browse** to browse the local hard drive and locate the system file to be used. Click **Upload** when you have selected the file to be loaded back onto the AP.
Restore Default Settings	You may also reset the A021-EA/AP back to factory settings by clicking on **Restore Default Settings**. Make sure to save the unit's settings before clicking on this button. You will lose your current settings when you click this button.

4.4.4 Firmware Upgrade

To upgrader you need the firmware file corresponding to the A021-EA/AP. Click 'Browse' to locate the file and then 'Start Upgrade' to begin the upgrading process.

It will take several minutes to upload and upgrade the firmware. After the upgrade is done successfully, the access point will reboot and get revalidated.

Note: DO NOT POWER OFF THE AP OR PRESS THE RESET BUTTON WHILE THE FIRMWARE IS BEING UPGRADED.

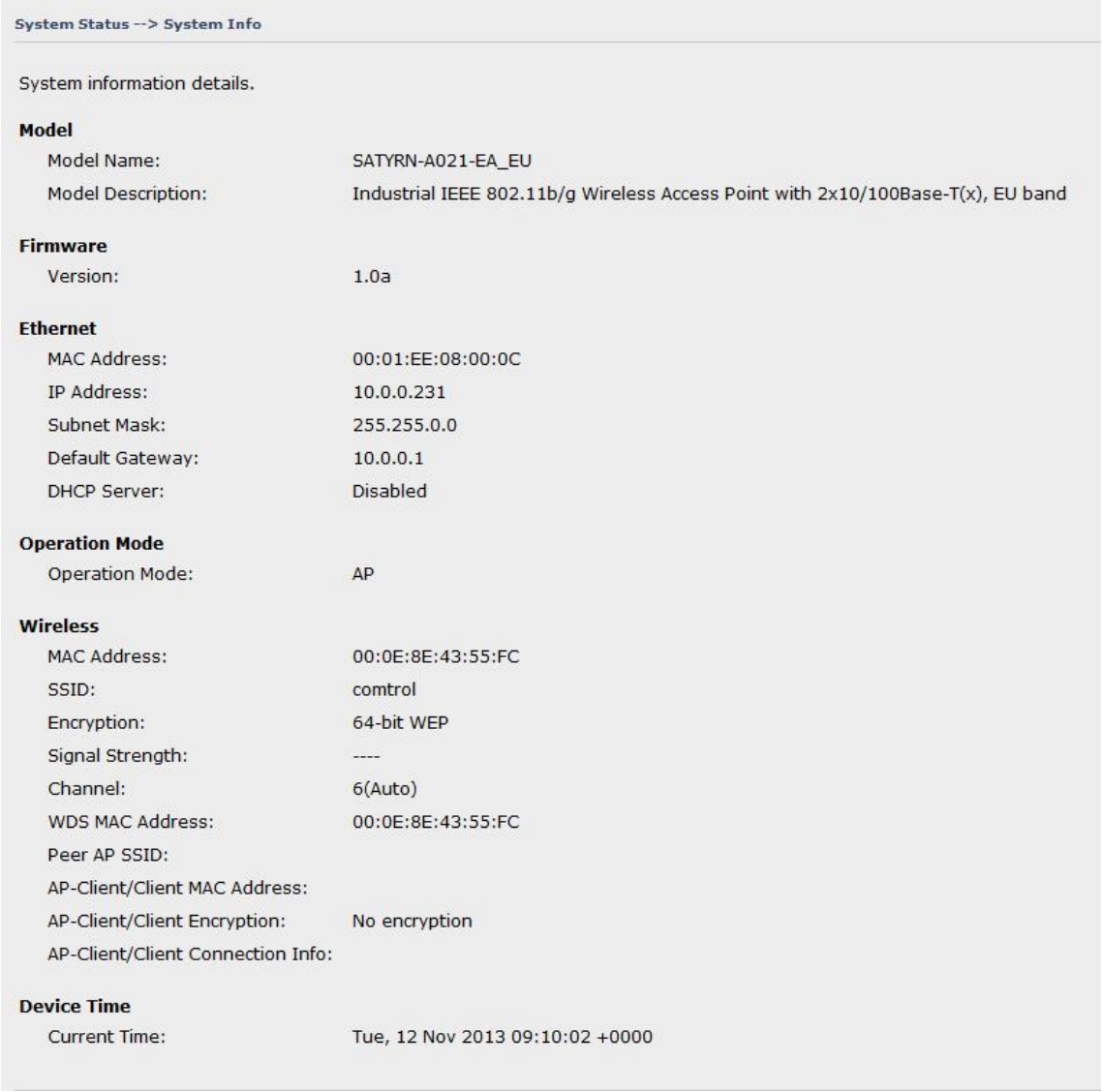
4.4.5 Miscellaneous

The AP can be restarted via a 'Warm Reset' by clicking 'Restart Now'

4.5 System Status

4.5.1 System Info

This page provides the various settings resident in the AP.



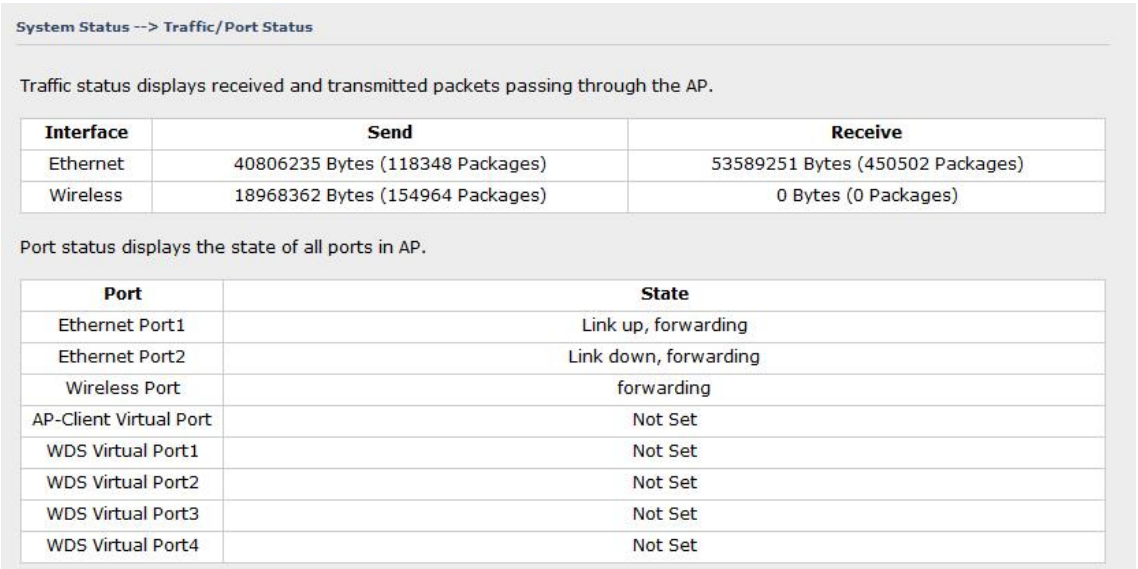
4.5.2 System Log

The system log tracks the important events and setting changes of the AP. If the AP is rebooted, the logs are automatically cleared.

Click '**Refresh**' to refresh the page; click '**Clear**' to clear log entries.

4.5.3 Traffic Statistics

This page displays the network traffic statistics for both received and transmitted packets through the Ethernet port and wireless connections associated with the AP. The traffic counter will reset when the AP reboots.

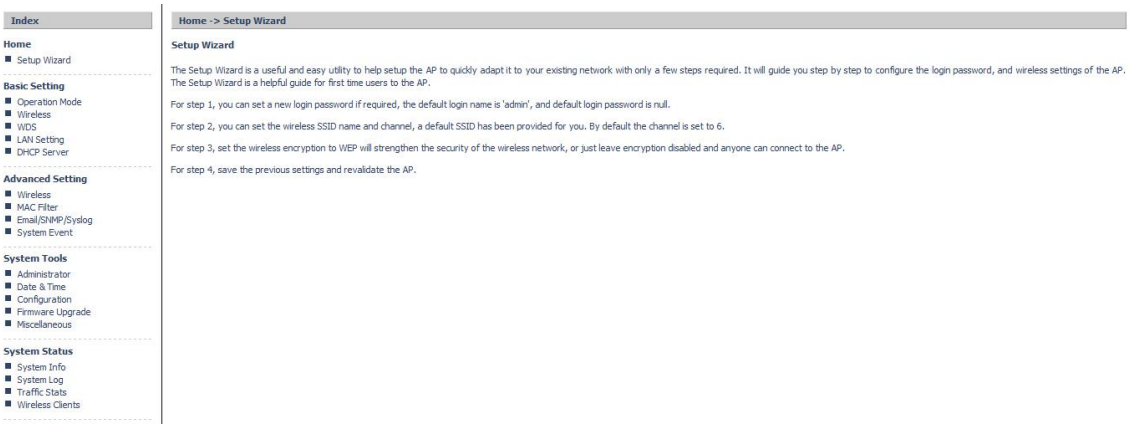


4.5.4 Wireless Clients

This page of the list displays the Mac Address of the wireless clients connected. Current TX Rate corresponds to the Transmission Rate in the Advanced Setting > Wireless pages.

4.6 On Line Help

Click on any item in the Online Help screen for more information.


Index
Home
Setup Wizard
Basic Setting
Operation Mode
Wireless
WDS
LAN Setting
DHCP Server
Advanced Setting
Wireless
MAC Filter
Email/SNMP/Syslog
System Event
System Tools
Administrator
Date & Time
Configuration
Firmware Upgrade
Miscellaneous
System Status
System Info
System Log
Traffic Stats
Wireless Clients
Home -> Setup Wizard
Setup Wizard
The Setup Wizard is a useful and easy utility to help setup the AP to quickly adapt it to your existing network with only a few steps required. It will guide you step by step to configure the login password, and wireless settings of the AP. The Setup Wizard is a helpful guide for first time users to the AP.
For step 1, you can set a new login password if required, the default login name is 'admin', and default login password is null.
For step 2, you can set the wireless SSID name and channel, a default SSID has been provided for you. By default the channel is set to 6.
For step 3, set the wireless encryption to WEP will strengthen the security of the wireless network, or just leave encryption disabled and anyone can connect to the AP.
For step 4, save the previous settings and revalidate the AP.

5 Technical Specification

LAN Interface	
RJ45 Ports	2 x 10/100Base-T(X), Auto MDI/MDI-X
PoE P.D. (Power Device)	Present at ETH2 A021-PA ETH2 act as Power Device (IEEE802.3af): IEEE 802.3af compliant input interface Power consumption: 8Watts max. Over load & short circuit protection Isolation Voltage: 1000 VDC min. Isolation Resistance: 10^8 ohms min
Protocols	IP, TCP, UDP, DHCP, BOOTP, ARP/RARP, DNS, SNMP MIB II, HTTPS, SNMPV1/V2, Trap, Private MIB
WLAN Interface	
Operating Mode	AP/Bridge/Repeater/AP-Client/Client
Antenna Connector	Reverse SMA
Radio Frequency Type	DSSS
Modulation	IEEE802.11b: CCK, DQPSK, DBPSK IEEE802.11g: OFDM with BPSK, QPSK, 16QAM, 64QAM
Frequency Band	(US)America/FCC: 2.412~2.462 GHz (11channels) (EU)Europe CE/ETSI: 2.412~2.472 GHz (13channels) (JP)Japan:2.412~2.484 GHz (13Channels)
Transmission Rate	IEEE802.11b: 1/2/5.5/11 Mbps IEEE802.11g: 6/9/12/18/24/36/48/54 Mbps
Transmit Power	IEEE802.11b/g: 20dBm
Receiver Sensitivity	-81dBm@11Mbps, PER< 8%; -64dBm@54Mbps, PER< 10%
Encryption Security	WEP: (64-bit, 128-bit key supported) WPA: WPA2:802.11i (WEP and AES encryption)

	PSK (256-bit key pre-shared key supported) TKIP encryption
Wireless Security	SSID broadcast disable
LED Indicators	PWR 1(2) (PoE, A021-PA / Ready: 1) Red On: Power is on and booting up. 2) Green On: Power is on and functioning normally. ETH1 (2) Link / ACT: Orange ON/Blinking: 10 Mbps Ethernet Green ON/Blinking: 100 Mbps Ethernet WLAN Link/ACT: Green WLAN Strength:1<25%, 2<50%, 3<75%, 4<100% Fault: Power or LAN link down (Red)
Power Requirements	
Power Input Voltage	Dual power inputs PWR1/2: 12 ~ 48VDC in 6-pin Terminal Block
Reverse Polarity Protection	Present
Power Consumption	6 Watts
Environmental	
Operating Temperature	-10 to +70^{o}C
Storage Temperature	-40 to 85^{o}C
Operating Humidity	5% to 95%, non-condensing
Mechanical	
Dimensions(W x D x H)	54.2 mm (W) x 106 mm (D) x 145.4 mm (H)
Casing	IP-30 protection
Regulatory Approvals	
Regulatory Approvals	FCC Part 15, CISPER (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS)
Shock	IEC 60068-2-27

Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Warranty	3 years

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